

**Playford Trust**



# Playford Trust Awards Scholars' Biographies 2019



## Playford Trust Regional Science & Engineering Scholarships

### Breigh Angove

Bachelor of Education (Secondary), Bachelor of Science,  
Flinders University

Despite frequently moving schools, Breigh successfully completed Year 12 with an ATAR of 97.00 and as Dux of Murray Bridge High. She studied specialist Mathematics, Mathematical Methods, Chemistry and Physics and won subject prizes and a range of awards for leadership and community service.

Over the past eight years, Breigh has been involved in many community activities. She has been a volunteer for Riding for the Disabled, performed with local drama groups, led the school's Student Representative Council, and mentored fellow students in a number of sporting events – including the Pedal Prix, with which she remains actively involved as a rider in the Old Scholars' Community Team.

After leaving school in 2017, Breigh began a Degree in Medicine, however, before long she realised it was not where her passion lay. For the remainder of 2018 she worked as a Student Support Officer, helping students with learning difficulties, and also became a tutor in maths and science. In the process, she discovered that she really wants to teach science and maths, especially to students in regional and remote areas.

### Nicholas Graham

Bachelor of Science (Honours) (Enhanced Program for  
High Achievers), Flinders University

Nicholas attended Grant High School in Mount Gambier, where he maintained high academic standards throughout his senior school years and studied Physics, Chemistry, Biology and Mathematical Methods in Year 12.

At the age of 10, Nicholas was diagnosed with Type One Diabetes, a life-long autoimmune disease. Following his diagnosis, his interest in the sciences exploded and he became particularly drawn to biology. For some time, he has maintained a strong involvement with the families of people newly diagnosed with Type One Diabetes.

Nicholas's school referee described him as an honest, well-mannered and forthright young individual with a diligent approach to challenges. After finishing Year 12, he took a gap year and worked to fund his study.

At Flinders University, Nicholas will specialise in Medical Biotechnology and, after completing an Honour's degree, and hopefully a PhD, aims to apply his education to disease research, with the goal of helping to find cures for diseases such as his own.

Keen to get as much experience as he can in his chosen field, he plans to undertake multiple internships during his study breaks and, ideally, gain overseas experience. His ideal future sees him having a hand in growing a company that is more driven by patient-health than focused on profit.

### Clayton Parker

Bachelor of Engineering (Honours) (Robotics), Flinders University

Clayton grew up on the family farm in West Range in the South East and has always had a keen interest in engineering. As a child he was creating and designing his own Meccano/K'nex contraptions, then he built his own computer and, more recently, he designed and constructed a cattle stock crate. Now he is excited about developing his passion and applying critical and creative thinking to the study of robotics engineering. He hopes to contribute to society by improving infrastructure, processes – and more.

Clayton achieved great results throughout his SACE and achieved an ATAR of 99.00, with merits in Physics and Mathematical Methods. He was Dux of the school in Year 12, received four subject awards and won the Barker Shield for academic excellence.

Sport is another passion – he was captain of his school basketball team and also played club football. And, as a member of his school's Student Representative Council, Clayton enjoyed providing opinions and ideas. He also found time to mentor Year 11 students in maths and physics, often devoting his entire lunch or recess breaks to help out.

One of Clayton's teachers offered the following comment: "In my thirteen years as a teacher, I have not come across such an exceptional student."

### Rebecca Pedler

Bachelor of Science (Honours) (Enhanced Program for  
High Achievers), Flinders University

Rebecca grew up on a cereal grain farm at Kapinnie, a 90-minute drive from Port Lincoln, and attended Cummins Area School. In Year 12 she studied Chemistry, Physics, Biology, Mathematical Methods and Psychology and achieved subject awards in all of them. She was also 2018 Dux of the Cummins Area and achieved an ATAR of 98.55 – the highest on the Lower Eyre Peninsula. This was a remarkable achievement given the 60-minute each-way bus trip to school, having to rely on video conferencing for maths study, and limited Internet and lab access.

Rebecca has been heavily involved in community sport – playing basketball, captaining netball teams and also serving as house captain at school. She loves spending time outdoors and being active.

In 2014, she travelled to Phnom Penh, Cambodia, where she volunteered at a local day care shelter through Projects Abroad. This trip was self-funded through working after school at the local IGA supermarket.

With academic interests in environmental ecology and evolutionary biology, Rebecca has keen interest in understanding how changes in an ecosystem can shape the way organisms adapt, and how human interaction can be made more sustainable. She has been described by her teachers as hard working, driven and honest.

## Jonte Reilly

Bachelor of Science (Space Science and Astrophysics),  
The University of Adelaide

Growing up on the family farm in the Riverland, Jonte was home-schooled throughout his primary school years before beginning his secondary education at Loxton High School in 2014. He has always enjoyed outstanding academic success, most noticeably in his final year, when he chose a demanding academic program. He received the subject prize in all four subjects he studied – Chemistry, Physics, Mathematical Methods and Specialist Mathematics.

Jonte was awarded The Barker Shield and the Loxton High School Maths/Science Undergraduate Scholarship Award. He was also 2018 Dux of the school and the second highest achieving student in the Riverland region. On top of this, Jonte served his final year as Deputy Head Boy and performed many tasks in support of the school and his local community.

His school referee noted Jonte's humility, explaining that he willingly shared his knowledge with others, frequently helping his colleagues both in class and during study times. His "mature relationships" with peers and staff were "always polite, friendly and respectful".

Currently, Jonte is undertaking a Bachelor of Science (Space Science and Astrophysics) at the University of Adelaide. He has a strong interest in the field and hopes one day to secure a position at the new Australian Space Agency and be at the forefront of this exciting industry.

## Henry Rogers

Bachelor of Science (Space Science and Astrophysics),  
The University of Adelaide

Henry grew up and went to school in Loxton in the Riverland. He is a motivated and assiduous student, displaying a keen interest and passion for physics. His self-described "driven nature" led him to attain one of the highest Year 12 ATARs in the Riverland, and he was quickly accepted into the Bachelor of Science by the University of Adelaide.

Henry was positively influenced by his participation in both the South Australian Space School and the National Space Camp for secondary students. He subsequently refined his interest in physics to the field of astrophysics and was particularly excited by the announcement last year of the formation of the new Australian Space Agency. On completion of his studies, he hopes to seek a career with the Agency, which is being based in Adelaide.

As is common in small rural communities, sport has been a part of Henry's life and he experienced many different codes throughout his childhood. He particularly enjoyed representing Loxton High at the Australian Volleyball Schools Cup in Melbourne three years in a row. His leadership skills were developed through captaining his school sports house, and by coaching junior basketball.

Henry has moved to Adelaide and is keen to meet new people and experience student life.

## Adelaide Hills Council / Playford Trust Scholarship

### Oliver Russell

Bachelor of Science (Honours) (Geography), Flinders University

Oliver is excited about studying science and geography and aims to explore human problems within a geographical framework. Having switched faculties after beginning a Bachelor of Medicine and Surgery, he now hopes to combine his passions for public health, human geography and environmental management to promote wellbeing and help communities thrive.

Oliver completed his secondary education at Concordia College and received academic excellence and merit awards in each of his six years there. He achieved a tertiary entrance score that placed him in the top two per cent of school leavers nationwide and was top of his class in both English and Geography.

In Year 12, in addition to studying hard, Oliver served as School Captain, competed in the Lions Youth of the Year Competition, and won a public speaking competition for the Mitcham/Unley area. He has since sought to combine his skills with his passions. He was junior leader of a student group that travelled to South Africa to provide academic support to disadvantaged students in the Kalahari Desert.

While studying medicine, Oliver fostered his interest in public and community health, taking part in the University of Adelaide's Global Health Organisation, Insight, and the 2017 Australian Medical Student's Association Global Health Conference. He has been described as highly capable and motivated, and also as a mature and thoughtful leader whose dedication and compassionate approach has resulted in outstanding contributions to the communities with which he has been involved.

## Chartwells / St Ann's College / Playford Trust Residential Scholarships

### Thomas de la Perrelle

Bachelor of Engineering (Honours) (Mechanical) with  
Bachelor of Science, The University of Adelaide

Thomas's senior year at St Joseph's School, in Port Lincoln, culminated in him being named Dux of Year 12, winning the Caltex All-Rounder Award and achieving merit certificates in Physics and Chemistry.

He is currently studying a Bachelor of Mechanical Engineering (Honours) with a Bachelor of Science at the University of Adelaide and is entering his second year. In 2018, he maintained a Grade Point Average of 7.0 and received an Executive Dean's Recognition of Academic Excellence award.

Thomas plans to major in physics. His goal, post-university, is to gain employment in the space industry, possibly in rural South Australia.

Since moving to Adelaide from the West Coast, Thomas has been supported not only by his family but also by the St Ann's College community. He has taken on several leadership roles at St Ann's, coaching both the college band and hockey team and offering pastoral care as a residential tutor.

Thomas has been described as an intelligent and committed young man with much to offer in the wider community.

## Lachlan Ryan

Bachelor of Engineering (Honours) (Mechanical and Sustainable Energy) | The University of Adelaide

Lachlan hails from Deep Creek, on the Fleurieu Peninsula. He boarded at Westminster School for five years and in 2016 was Captain of Boarding and a member of the school leadership team.

He completed Specialist Maths, Maths Studies, Chemistry, Physics and Outdoor Education during Year 12 and received the subject prize for Outdoor Education. He enjoyed that subject so much that he took a year off to pursue his interests – and gained qualifications in kayaking and bushwalking. He used his skills to undertake a range of activities with high school students, thoroughly enjoyed the whole experience and still spends every spare moment he has outdoors.

Last year, Lachlan began his Degree in Engineering at the University of Adelaide and did well. He is hoping his study will give him the opportunity to work in the renewable energy industry. He is passionate about how we use energy and would love to see a complete shift to renewables, which he believes would result in a healthier, more sustainable future.

Lachlan has been described as a hardworking and disciplined student who always demonstrates a positive attitude towards his studies. He is never satisfied until he knows he has put in his very best and achieves what he set out to achieve.

## Inaugural Aurecon / Playford Trust Electrical Engineering Scholarship

### Ashleigh Chin

Bachelor of Engineering (Honours) (Civil, Structural & Environmental) | The University of Adelaide

Ashleigh is currently completing her Honours project following a summer research experience at the University. She has been awarded the Executive Dean's Recognition of Academic Excellence several times, in recognition of her high academic performance across all subjects.

At the end of her first year of tertiary study, Ashleigh was awarded the Ian Cocks Memorial Trust Engineering Scholarship. She has also been employed by the University as a Teaching Assistant for Water Engineering II and Engineering Modelling and Analysis I. She is President of the Civil Engineering Student Society.

Ashleigh has been a member of the Unley St John Ambulance Division for 10 years and is currently Cadet Leader, responsible for teaching new members first aid skills. Last year she was actively involved with the University's Women in STEM Careers Program.

Her Honours project is focused on the use of economic incentives in changing future land use in cities. This work involves using models of land use in conjunction with natural hazard maps to better understand how to plan for the future. Her supervisor says Ashleigh is dedicated to developing her technical engineering skills and has excellent teamwork and communication skills.

Ashleigh undertook a work placement at Aurecon in the Built Environment team. She thoroughly enjoyed this experience and found her colleagues approachable, supportive and inclusive. Her aim is to work in an engineering consulting firm and make a positive contribution to society.

## AusIMM / Playford Trust Minerals Industry Scholarships

### Ainsley Bosch

Bachelor of Engineering (Honours) (Mining), The University of Adelaide

Ainsley grew up in the Flinders Ranges where her unique surroundings shaped her love for both geology and the outdoors. This passion, coupled with the opportunity to work in remote locations, drew her to pursue a career in the resources industry.

From an early age, Ainsley displayed leadership qualities, and she was both school captain and sporting house captain. Her service in these roles, combined with her natural ability to motivate and work in teams, saw her receive the Long Tan Youth Leadership and Teamwork award.

In her second year of university, Ainsley undertook work experience at Fosterville Gold Mine in Victoria. Initially enrolled in the combined Petroleum & Mining Engineering Degree, her time at Fosterville confirmed that her passion lay in the mining industry, so she transferred to the single Mining Engineering stream.

University has given Ainsley the opportunity to further develop her leadership skills through involvement in numerous student clubs and committees and she is currently president of the AusIMM Adelaide Student Chapter. Ainsley has shown great resilience, tenacity and dedication during her time at university, holding down several part-time jobs while studying full time.

Her Honours project is to develop a model for the in-situ recovery of copper in Kapunda. Her research will explore this non-traditional method of copper extraction from both a technical perspective as well as the social and environmental impacts.

After graduation, Ainsley is keen to take on the challenge of a fly-in-fly-out role as a mining engineer, and to continue her life-long learning.

### George Symonds

Bachelor of Science (Advanced) (Honours) (Geology), The University of Adelaide

George's passion for geology and minerals began when he achieved Dux of his school, was awarded the Principal's Choice Scholarship and selected Earth Science as an elective. This year he is completing his Honours project in the Northern Gawler Craton, where he is aiming to date alteration ages in iron-oxide copper gold systems.

George recently completed vacation work with Kirkland Lake Gold in the Northern Territory, where he worked on a project looking at the prospectivity of platinum and palladium, and also developed drill core processing skills. This experience exposed him for the first time to a working mine environment, and he greatly enjoyed it.

Last year, George attended a winter school run by the Australian Institute of Nuclear Science and Engineering. There he learned a number of techniques applicable to his Honours project and also completed research using uranium-lead dating on lake sediments. Eventually he would like to work on exploration projects and industry-affiliated research programs to help improve the detection and cost-effective recovery of minerals under deep cover.

George grew up in southern Sudan, which exposed him to humanitarian challenges and gave him a great understanding of the value of tolerance and diplomacy. He volunteers for Trees for Life in wetland habitat revegetation and also provides time and expertise for South Australia's *ScienceAlive!*, the largest single interactive science exhibition in Australia.

George has designed and assembled his own blacksmithing forge and foundry and is constantly devising and conducting scientific experiments.

## Adam Zanardo

Bachelor of Engineering (Honours) (Petroleum and Mining),  
The University of Adelaide

Adam is a natural leader who is hard-working, committed and passionate about the minerals industry. He was fortunate to secure vacation work during the summer in the Mining Department at Glencore's Mount Isa Mines. Here he was able to put his knowledge into practice, leading a project on underground water management modelling techniques and outlining recommendations for improvement.

Adam excels at mine design and he won the 2018 Maptek Mine Design Prize for the best hard rock mine design. Working in a team of four, he was able to apply his engineering knowledge, carpentry expertise and technical design skills to develop and demonstrate a practical and profitable copper/gold mine.

A strong believer in the benefits of mentoring and practical experience, Adam was actively involved in a recent university-organised study tour of mines in the United States. He also attended the 2018 AusIMM New Leaders Conference and the National Mining Games held in Sydney.

Adam is a natural motivator and well regarded by his peers and lecturers. He is also a passionate musician. After graduating, he hopes to achieve a leadership role and is keen to ultimately 'give back' to the minerals industry and to the next crop of resource professionals. Adam believes technology and automation will play an important role in the future of the minerals sector, as well as helping to manage social impact, perceptions and environmental best practice.

## Codan / Playford Trust Scholarship

### Joshua Fuller

Bachelor of Engineering (Honours) (Electrical and Mechatronic),  
University of South Australia

Joshua is passionate about electronics, robotics/autonomous systems and embedded systems and wants to pursue a career in hardware or systems engineering while working in the areas of R&D or design. He is a high-achieving student in his final year of a Bachelor of Engineering (Honours) Electrical and Mechatronic at the University of South Australia.

Throughout his studies, Joshua has shown consistent academic excellence and has received a merit award every year. He also received the PW Stephens Engineering Prize for the highest Grade Point Average in his first year of the Bachelor of Engineering program.

Joshua enjoys putting his tertiary studies into practice in industry and has completed a total of 44 weeks of full-time work experience with Lower Murray Water, UniSA and Saab Australia. He has also been the secretary of the University of South Australia's Mechatronic Engineering and Robotics Club since 2016. This role has seen him participate in many volunteering outreach events, engaging with a wide range of students through the promotion of engineering and science, technology, engineering and mathematics (STEM).

Joshua is currently completing his final year Honours project, titled "Drone Hacking", in which he is partnering with the Defence Science and Technology Group. This project consists of reverse engineering the software/hardware/firmware systems of an Unmanned Aerial System to look for vulnerabilities and opportunities for exploitation.

## Fay Fuller Foundation / Playford Trust Honours Scholarship in Health Sciences

### Taylor-Jade Woods

Bachelor of Medical Science (Honours), Flinders University

Taylor-Jade has an excellent academic record, and she has been described as bright, hard-working, capable and able to see the big picture. She completed Year 12 with an ATAR of 98.35 and received a Flinders University First-Year Education Costs Bursary based on academic merit. She has also twice received the Chancellor's Letter of Commendation.

At St Mary's College, Taylor-Jade was elected to the Student Representative Council and worked to improve student wellbeing and college ethos. Each year, the school raised funds for social justice issues and causes. Taylor-Jade's personal interest was homelessness and she took part in Vinnie's Community Sleepout and the Hutt Street Centre's *Walk a Mile in my Boots* events.

She had her first experience in health economics in her third year at university, when she conducted a systematic, critical review of economic evaluations that considered the costs and outcomes of diabetic foot ulcer infection. Her Honours co-supervisor says Taylor-Jade has a collegial manner of interaction with her team and an enthusiastic approach to study that is unmatched by her peers.

Beyond Honours, Taylor-Jade is hoping to undertake a PhD and work to influence healthcare delivery policy. She believes that health economics, when used to guide public health policy-making, can effectively reduce costs borne by patients, the healthcare sector and government and at the same time improve clinical outcomes. In her career, Taylor-Jade would like to work as a health economist, independently or with public health researchers, to investigate ways to improve healthcare expenditure by South Australians.

## GSA / Playford Trust Honours Scholarship in Earth Sciences

### Teagan Romyn

Bachelor of Science (Advanced) (Honours) (Geology), The University of Adelaide

Teagan consistently received the highest of high distinctions through her undergraduate career, along with numerous awards and scholarships, including two AusIMM awards.

She was awarded the Reg Sprigg Prize for Level 1 Geography in 2016, and in 2017 won both the Glenn Leigh Scotford Memorial Prize for Level 2 Geography and the Department of the Premier and Cabinet & Petroleum Exploration Society of Australia Sedimentology Excellence Award. The same year, she went on a study tour to Oman to learn about a large slab of oceanic crust called the Semail Ophiolite.

In 2016, Teagan and a group of fellow undergraduates entered – and won – the Frank Arnott Award, an international geoscience challenge that encourages lateral thinking in solving industry-related geoscientific problems. In this case, it was the issue of being able to visualise multiple datasets at once. The experience taught Teagan the relevance of academic input in solving industry-related problems and paved the way for her involvement in the 2018 NExUS (National Exploration Undercover School) program.

Her Honours project involves understanding the metamorphism of the Western Gneiss Complex. This region in Norway contains two major rock types, only one of which records high-pressure metamorphic events. Her project aims to discover why some rocks are "lying" about their exposure to these events.

Teagan is the current Student Representative for the Australian Society of Exploration Geophysicists. Her supervisor describes her as one of the best and most enthusiastic students to have come through the University of Adelaide Department of Earth Sciences for several years.



## Inaugural Nyrstar / Playford Trust Scholarships

### Princess Mae Ladra

Bachelor of Engineering (Honours) (Mechanical), University of South Australia

Princess is in the final year of her degree. Her professional interests include resources, operations and project management. She is a member of the Golden Key International Honour Society, which recognises high achieving students, and was in the top 15 per cent in her field in 2016. Princess is President of the University of SA Society of Engineers Club, which provides on and off-campus events and activities for students, and fosters interaction between students, staff and professionals.

Throughout her tertiary studies she has tackled a variety of projects, from engineering practice to management, and has been commended for the quality of her work and exemplary work ethic. She travelled to northern Thailand to lead an Unbound Action Project focusing on infrastructure, with the aim of improving navigation in a village.

Earlier this year, Princess returned to her hometown of Port Pirie to do vacation work at Nyrstar's smelter. She expanded her knowledge of planning, optimisation of production, and manufacturing processes that value safety, sustainability and the environment.

She enjoyed the extensive interaction with engineers and supervisors at Nyrstar, and says she is now driven to further her research project – which aims to idealise the metal melting system through understanding process-property relationships and conducting practical investigations. The concepts and methods behind this study involve structural and engineering analysis, quality control, and operation and resource planning.

### Rebecca Tan

Bachelor of Engineering (Honours) (Chemical) with  
Bachelor of Finance, The University of Adelaide

Throughout her Chemical Engineering degree, Rebecca has nurtured her passion for the resources industry. She has become immersed in the industry through her minerals-related Honours project, her experience in the resources industry, and her involvement with the AusIMM Adelaide Student Chapter.

In 2018, she completed her Honours project with CSIRO Minerals. Through an electrochemical study, she aimed to improve understanding of the dissolution mechanism and interfacial properties of chalcopyrite heap leaching. She has also had work experience in the resources industry, working for 12 weeks in gas transmission at SEA Gas, and for 12 weeks in oil refining with ExxonMobil. She was awarded the 2018 AusIMM/Playford Trust Minerals Industry Honours Scholarship, and in 2019 will be the Vice President of the AusIMM Adelaide Student Chapter. These experiences have inspired her to build a career where she will have the ability to work on site and be exposed to South Australia's most important industrial facilities.

Rebecca has demonstrated leadership and community commitment by volunteering with Project Everest in Cambodia on a water assessment, and representing the School of Chemical Engineering at the International Engineering Summer School in China. She received a New Colombo Plan Scholarship for both of these experiences and had the opportunity to network with like-minded peers from all over the world. Rebecca's supervisor described her as "a high achieving student with outstanding work ethic, independence, and natural talent".

### Thomas Jackson

Bachelor of Engineering (Honours) (Mechanical), University of South Australia

Thomas is from the small town of Redhill in the Mid North of South Australia. He has always had an interest in machines and steel fabrication and this stems from being around his father's Jackson Engineering workshop from a young age.

He is described as a hard-working, high achieving student who strives to perform to the best of his abilities in everything he does. According to his university program director, he is one of the top students in his cohort.

While Thomas has always been committed to achieving academic excellence, he is also determined to continually develop his professional skills and make connections. He has worked to support his studies, sought engineering career experiences and is a member of Engineers Australia.

Thomas is also active in the community. At school, he won the Australian Defence Force's Long Tan Youth Leadership and Teamwork Award and he has shown leadership in university projects as well, including the Engineers Without Borders Challenge and in both hockey and tennis teams. He coaches junior hockey, volunteers for the Redhill Country Fire Service and is a pool lifeguard at the Crystal Brook and Port Pirie Swimming Pool.

Thomas aims to build a career in the mining or smelting industry and to make a difference using innovative and sustainable solutions.

### Barbara Karageorgos

Bachelor of Engineering (Honours) (Chemical –  
Minerals Processing), The University of Adelaide

Barbara is a dedicated student and recently won the AusIMM Education Endowment Fund Award for academic achievement. This is awarded annually to the student who achieves the highest annual examination results in each year of an AusIMM-recognised undergraduate course.

Last year she was also nominated by her cohort to be the second-year representative for the Student Staff Liaison Committee. Barbara is passionate about being a voice for students, so she can improve how her chemical engineering courses are taught.

As part of her scholarship, Nyrstar offered Barbara work experience at its Port Pirie smelter over the summer, and she undertook a six-week project in the copper plant. The aim was to achieve consistently low chloride levels in the copper leach residue so it could be processed in the primary furnace. The project involved extensive test work in the laboratory, as well as creating flow-sheet designs with the senior process engineer, and solving mass balances.

The findings from her project were highly valuable for Nyrstar's future large-scale test work. Overall, Barbara learned the importance of being an effective problem solver and is now inspired to develop this further in her university studies.

## OZ Minerals / Playford Trust Minerals Industry Honours Scholarship

### Braden Morgan

Bachelor of Science (Honours) (Mineral Geoscience),  
The University of Adelaide

Having completed his Bachelor of Science, Mineral Geoscience, Braden has begun an Honours degree focusing on the crustal evolution and exploration potential of South Eastern South Australia. Dr Richard Lilly, his primary supervisor, is enthusiastic about them working together this year.

Eventually, Braden hopes to work in the metals and minerals industry, preferably here in SA, and he is particularly excited about the progressive exploration and development of the Oz Minerals Carrapateena mine, which he believes should provide good opportunities for geoscience students.

In his undergraduate studies, Braden won Outstanding Academic Achievement awards three years in a row. His focus and dedication have also been recognised by the Australasian Institute of Mining and Metallurgy which presented him with an AusIMM Academic Achievement Award in 2017 for being the highest achieving student with a Bachelor's Degree in Mineral Geoscience. That same year, his keen practical skills won him first place in the Brian Daily Prize for Geological Mapping.

Braden has been selected to be the academic mentor for mineral geoscience students two years running, and he has volunteered his time in both the Sciences Marketing and Recruitment Team and the Vice Chancellors Orientation Host Program. He is a member of the SA Student chapter of AusIMM, the Adelaide University Geology Society and the South Australian branch of the Society of Economic Geologists.

Braden recently completed summer vacation development at Gold Fields Australia's Granny Smith mine and received extremely positive feedback from the tight-knit underground geology team.

## Playford Trust Honours Scholarships - The University of Adelaide

### Keshika Alagiyage

Bachelor of Engineering (Honours) (Chemical and Pharmaceutical)

Keshika was rewarded for her excellent academic performance when she received the Sir Robert Chapman Prize in her first year at university. That prize is awarded to only one student from all of the University of Adelaide's Bachelor of Engineering degrees and is based on academic merit.

She also received the Executive Dean's Recognition of Academic Excellence Award in all three of her undergraduate years and won the Lokan Prize for her second-year academic results in the School of Chemical Engineering.

As part of the Adelaide Summer Research Scholarship program, Keshika recently undertook a research project focusing on the development of ferritin, a natural protein nanoparticle, as an anti-cancer drug delivery platform.

She was able to assist in the selection of optimum conditions for further research in the University's pharmaceutical laboratories, and her contribution was recognised by her supervisor.

Keshika is interested in understanding and optimising existing processes and has a keen mind for strategy and putting specific methodologies into practice. She hopes to further develop these interests in a real-world setting, initially by becoming a process engineer. Her preference is to work in the area of pharmaceutical manufacturing.

Keshika has been a Maths and English tutor, played competitive sport and she participated in leadership teams in high school.

### Thomas de Heus

Bachelor of Engineering (Honours) (Mechanical and Sustainable Energy)

Thomas is passionate about sustainability and wants to pursue a career in renewable energy, humanitarian engineering, or a combination of the two.

He was Dux of Mercedes College in Year 12 and has maintained a strong academic record throughout his time at university, receiving the Executive Dean's Recognition of Academic Excellence in 2016. Thomas uses his degree and extensive leadership training and experience to lead teams of university students to work on social business projects in developing countries. He is heavily involved with Project Everest Ventures (PEV), especially the implementation of cleaner cookstoves in Cambodia and Timor-Leste.

Thomas's Honours project is on the commercial viability of a solar adsorption refrigeration system. This system uses the principle of adsorption and desorption to allow a fully sealed, off-grid system with no moving parts to produce ice overnight. Thomas plans to use his social business experience with PEV to design a system that could viably be implemented in developing rural communities with hot climates. His academic referee has commended him for selecting a project that not only has clear benefits within the humanitarian sector but is also of interest from a technical engineering perspective.

From a field of more than 500 applicants, Thomas was one of a handful of engineering students selected to do an internship at Aurecon over the recent summer holidays. His work focused on the mechanical design of building services and he says he learned an incredible amount about applying technical knowledge learned at university to solving real-world problems.

### Maximilian Donaldson

Bachelor of Engineering (Honours) (Chemical) with  
Bachelor of Science (Chemistry)

Max is a highly capable student who is committed to his education, values being challenged, and actively involves himself in all aspects of coursework. For his efforts, he has received academic awards from the Faculty of Engineering, Computer and Mathematical Sciences, AusIMM, and Esso Australia.

Max's peers often look to him for direction and support and this has been recognised by the minerals industry. In addition to being awarded an AusIMM Education Endowment Fund Scholarship, he was recently presented with the prestigious Sir Frank Espie/Rio Tinto Leadership Award for 2019.

Max believes in building a strong student community and his involvement in various activities, such as Engineers Without Borders, sports and student clubs, demonstrates his commitment both to his community and his chosen profession. He approaches all these activities with enthusiasm, commitment and integrity.

Max works as a trade assistant during shutdowns on a number of mine sites and has recently been working at OZ Minerals as a student metallurgist. Aiming to have a meaningful career as an industry leader, he champions culture, innovative thinking, value creation and technical excellence and believes in learning from the experiences, ideas and wisdom of others.

For his Honours, Max was determined to find an industry-supported project that would benefit the minerals processing sector. He will investigate the flotation treatment of iron oxide copper-gold ore and explore the possibility of more selective flotation, including the value drivers.

## Jenna Draper

Bachelor of Science (Honours)

Jenna is a dedicated ecologist who, from an early age, has demonstrated a passion for life in all its forms.

When she graduated from Our Lady of the Sacred Heart College in 2014, she was Dux of Biology. She wanted to study sciences at university the following year, but chemistry had not been one of her chosen subjects at high school. She persevered, studied SACE chemistry independently, and was accepted to begin a Bachelor of Science majoring in Biology and Chemistry in 2016.

During her undergraduate studies, Jenna received numerous awards, including two Vice Chancellor's Letters of Recommendation and the Wilhelm-Ruff Science Grant. Winning a New Colombo Plan Scholarship enabled her to undertake ecological research in Fiji, looking at how native pollinators can aid crop production. Following the study tour, she spearheaded the drafting of a manuscript in preparation for publishing the findings of the research.

Jenna's Honours research is centred around the conservation of plants with rare breeding systems, and understanding how they reproduce with the help of pollinators. She aims to make conservation recommendations to improve how these plants are managed in South Australian dune ecosystems. The research will be conducted at the Tennyson Dunes Conservation Reserve, a precious and biodiverse remnant of dune ecosystem left from before European settlement.

Jenna's supervisor described her as a passionate advocate for building resilience in environments susceptible to biodiversity loss and a future environmental leader in the making.

## James Feeney

Bachelor of Engineering (Honours) (Electrical and Electronic) with Bachelor of Finance

James's academic transcript is dominated by high distinctions. He is now in his fifth and final year, working on an Honours project which requires his team to solve the following problem: *In a cluttered environment, a team of autonomous drones are tasked to safely navigate through obstacles to locate a target. They must then simultaneously arrive at the target from multiple directions to achieve various operational objectives.*

James recently returned from studying in the United States at the North Carolina State University, where he completed one semester of study and worked hard to achieve excellent results.

He has been fortunate to secure some relevant and rewarding work experience. He worked casually at electronics firm Tekelek, assisting engineers with the design and manufacture of products. At Coopers Brewery, where he was offered vacation employment in the Engineering Department, he had the opportunity to lead and work on a number of successful projects that benefited the business. He has also successfully developed software to program a wifi chip.

James has represented the University of Adelaide in the national UBS Investment Banking Challenge, working on a real-life merger and acquisition. He was flown to Melbourne to present to UBS partners and managers and his team was placed third out of eight universities competing from around Australia.

James is looking forward to embarking on his career in South Australia and says he is keen to work with influential leaders and Partners of the Playford Trust.

## Tristram Fyfe

Bachelor of Engineering (Honours) (Chemical) with Bachelor of Finance

Tristram is a highly driven, results focused individual who embraces challenges – viewing the process to overcoming them as a unique opportunity for growth. He has achieved high grades throughout his time at university and recently won an Academic Award from the Faculty of Engineering, Computer, and Mathematics Sciences.

In his career, Tristram wants to be part of a significant change in the minerals processing industry, developing new processing techniques and improving the efficiency of existing ones. His goal is to use advances in technology to drive down utility usage and improve profitability, while reducing the environmental impact of processing activities.

He also hopes to be part of the growing 'waste to value' sector to ensure the Australian economy can continue to grow sustainably. Tristram is compassionate and community focused, and he volunteers with a range of organisations including Engineers without Borders Australia, the Red Cross Blood Service, and several student societies at his university.

He is currently working on his Honours project, in conjunction with OZ Minerals, to develop a model which may be of significant benefit to the minerals industry. His project explores a method for integrating ore-sorting into characterisations of ore bodies to determine the areas of greatest profitability. Thomas has been selected to travel with the School of Chemical Engineering to Vietnam this month (April 2019) to learn and collaborate with students there, connect him with the Vietnamese community and increase his knowledge of the region.

## Playford Trust Honours Scholarships – Flinders University

### Matthew Evans

Bachelor of Engineering (Honours) (Software) with Bachelor of IT (Digital Media)

Matthew is high achieving student who has won the Chancellor's Letter of Commendation twice and a scholarship for an internship in France as part of the Nicolas Baudin Scholarship Program. The engineering components of his study have given him a deep understanding of mathematics and programming, as well as long-term project planning and management. The digital media topics he studied allowed him to learn valuable skills in marketing, design, and 3D modelling.

His experience interning in France was incredibly valuable, exposing him to working with people of different cultures in a bilingual environment. In this internship, he experimented with various Monocular SLAM algorithms – processes used to localise a drone and map its environment using only a single camera.

As software development and IT is such a rapidly evolving field, Matthew's career aspirations are quite broad. However, he would love to work with computer vision technology, digital image or video analysis and 3D simulations for use in virtual reality. He believes these technologies have a swathe of applications, where virtual scenarios can be created for training people in dangerous or high-pressure occupations, such as piloting a plane, or in military simulations.

Matthew is a multi-instrumentalist who been in music bands throughout his life. As part of the Raiders Drum Corps he has performed at the Credit Union Christmas Pageant, the 2015 Cricket World Cup, and WOMAdeelaide.



## Jai Meyers

Bachelor of Science (Honours) (Biotechnology)  
(Enhanced Program for High Achievers)

Jai is a 2019 Honours student with a passion for molecular and cellular biology research. Originally from Whyalla, he embarked on his university studies with the benefit of a Playford Trust Regional Science and Engineering scholarship. He did extremely well in his degree, receiving both the Flinders University Richard Coultas Award and the Queenie Gibbins Biotechnology Scholarship.

Through his high level of involvement in university life, Jai demonstrates leadership and a desire to help others. He is a supervised study leader and a chemistry demonstrator for first-year Biology and Chemistry students. He is a Student Ambassador for Flinders, a student leader in the Flinders Living community and is involved in the Yungorendi Tutoring Program

Jai's Honours research project is focused on the metabolic role of particular drug metabolising enzymes in breast cancer, an area previously unexplored. This research may allow for the development of a greater understanding of tumour growth and progression, while also potentially leading to the identification of biomarkers or drug targets.

The project was launched off the back of a successful undergraduate project in the Flinders Cancer Centre Molecular Pharmacology Department, in which Jai produced a substantial amount of significant data while simultaneously learning the necessary skills and techniques to work independently in a molecular biology laboratory.

Jai's supervisor said of him: "I would place Jai within the top five per cent of 3rd year students I have supervised in terms of his natural aptitude for science, his ability to learn and become independent, and his self-motivation and adaptability."

## Susanne Sahlos

Bachelor of Science (Honours) (Nanotechnology)

Susanne is a dedicated science student with a special interest in nanotechnology. She received the Chancellor's Letter of Commendation in both 2016 and 2017, was awarded the 2017 Queenie Gibbins Scholarship in Science (Biotechnology), and last year won a Computer Science and Engineering Summer Research Award. Her supervisor considers her "clearly on a path towards becoming a promising scientist".

During her undergraduate studies, Susanne engaged in a range of additional activities that saw her complete the Australian National Fabrication Facility Microengineering Winter School program, as well as more than 40 online short-courses. For her extracurricular efforts, she gained silver, gold and platinum levels in the Flinders University Horizon Award.

Susanne demonstrated her leadership skills during various group-based projects and volunteered for the role of Topic Representative for Molecular Biology in 2017. She is a member of the Golden Key International Honour Society, the Royal Australian Chemistry Institute and the Biology Society SA.

In 2018, she benefited from a work placement at the Tonsley Innovation Precinct with the medical imaging firm Micro-X. This experience encouraged her to learn more about new x-ray technologies, which is why she has designed her Honours project with Micro-X as her industry partner. The research involves the interfacial analysis of components of modern x-ray tubes, and it could lead to an improvement of the current production process. The development of this new technology is important as it facilitates the design of small and light-weight x-ray imaging devices suitable for medical and security purposes.

## Laura Schroder

Bachelor of Science (Honours) (Enhanced Program for High Achievers)

Laura is a very promising young scientist who hopes to contribute to research in both terrestrial and marine ecosystems to help preserve biodiversity in the face of anthropogenic threats, like climate change. In her undergraduate degree she excelled in the Enhanced Program for High Achievers and received several Chancellor's Letters of Commendation in recognition of her work.

Last year, Laura undertook a very successful research project in which she developed a new method and formula to determine the growth rate for mangrove trees. She received the exceptionally high mark of 95, her results have wider applicability, and there are plans to publish her findings.

On top of her own studies, Laura has assisted various Honours and PhD students from the Flinders Marine Ecology Laboratory with their research on invasive European shore crabs, a saltmarsh restoration project, and assessments of mangrove biomass. She has volunteered with the local Natural Resources Management Board at her home base in Keith and recently took part in a summer scholarship program with the South Australian Research and Development Institute's Aquatic Sciences Program, furthering her research skills by taking on a small project on seagrass.

In her Honours project, Laura is seeking to investigate the ecological responses to groundwater discharge in South Australian coastal embayments, including the Coorong and Coffin Bay. She will look at benthic fauna, which play an important role in the food web of coastal ecosystems, and fish fauna, which include many recreationally and commercially important species. This project will have applied relevance for the future management of coastal embayments in South Australia.

## Samuel Tonkin

Bachelor of Science (Honours) (Enhanced Program for High Achievers)

Samuel is part of the Institute for Nanoscale Science and Technology at Flinders University. He has performed exceptionally well in his studies and received multiple official commendations.

He competes athletically at a high level as well. Last year he represented South Australia in the sport of Ultimate Frisbee and won a gold medal at the Under 22 National Championships. He has also given back to the community by serving on the Flinders University Ultimate Frisbee board.

In his studies so far, Samuel has conducted two research placements within Flinders. In his second year, he developed a method in which graphene nanoscrolls could be directly produced from graphite. This research has the potential to significantly reduce the manufacturing costs of these graphene nanoscrolls, facilitating their use in a wide range of applications, including batteries and solar panels.

Samuel's Honours project will build on research he performed during a placement in this third year of study. He has developed a technique in which self-adhesion of sulfur polymers can be induced at room temperature using chemical catalysts. This research would allow the use of a new form of crosslinked plastics which can be repaired and recycled without the use of heat. These advanced materials have the potential to replace and improve conventional plastics while significantly reducing plastic pollution.

## Playford Trust Honours Scholarships – University of South Australia

### Jacob Dalglish

Bachelor of Science (Honours)

Jacob has long been interested in chemistry, physics and maths and this drove him to study a Bachelor's Degree in Advanced Materials Science. The research he was exposed to at both UniSA and the Future Industries Institute (FII) influenced his decision to undertake Honours with the FII – and he hopes this will lead to a PhD.

While an undergraduate, Jacob was awarded Chancellor's Letters of Commendation twice, became a member of the Golden Key International Honours Society and was Student Council representative for the University's physics student cohort.

He was also one of very few students selected from around Australia and New Zealand to attend a winter school hosted by the Australian Institute of Nuclear Science and Engineering. This gave him the opportunity to attend presentations on nuclear research, meet and network with fellow students, and visit Australia's Nuclear Science and Technology Organisation.

During his Honours degree, he will be working with researchers at the Future Industries Institute looking at the structure, composition, synthesis and properties of various electrochromic polymers with the prospect of advancing research and applications in the field.

Jacob's supervisor commended him for undertaking research projects in other groups within the University to ensure he gets a breadth of experience, and also for looking deeply into research questions. Another member of the academic staff described him as "a very bright young scientists, who is thorough and considered in his acquisition of knowledge."

### Cintya Dharmayanti

Bachelor of Biomedical Research (Honours) /  
Bachelor of Pharmaceutical Science

Growing up, Cintya aspired to become many things: creative like an artist, humanitarian like a doctor, and curious like a scientist. At 21, she graduated with a degree in Pharmaceutical Science which allowed her to do all three: create, help and discover.

These days, Cintya aspires to work in a pharmaceutical company and be involved in creating the next generation of breakthrough medicines. To that end, her Honours project will involve the creation of a bisphosphonate implant for the treatment of osteoporosis, with the aim of improving patient compliance, acceptability and, ultimately, outcomes.

Throughout her undergraduate studies, Cintya received scholarships and awards in recognition of her academic achievements. These included several Chancellor's Letters of Commendation, the Mayne Pharma Second Year Pharmaceutical Science, Best 2nd Year Student and Best 1st Year Student prizes, as well as an Undergraduate Research Experience Scholarship and a Vacation Research Scholarship.

She has been an enthusiastic member of the university community, involving herself in Orientation and open days, and volunteering at South Australia's *Science Alive!* event. Outside of university, Cintya is an active member of the Balinese Society of South Australia, and is that organisation's co-secretary.

Cintya's supervisor describes her as a compassionate, dedicated and polite young woman with the potential to become an exceptional researcher. She has strong practical and analytical skills, backed up by a very sound knowledge of theoretical aspects.

### Andrew Du

Bachelor of Engineering (Honours)  
(Electrical and Electronic)

Andrew has always been interested in working on new and original ideas that have the potential to make a difference in people's lives. In each of his three years as an undergraduate he was awarded the Chancellor's Letter of Commendation. He also won the eLabtronics Linear Electric Prize for best overall performance in his course, and he has been a mentor for other students.

It was in his second year of university when Andrew recognised that mathematics, control engineering, signal processing and machine learning were the most important tools in his engineering toolset. His interest in control engineering, in particular, led to him undertake a summer internship at the Defence Science and Technology Group. There he had the opportunity to work on a project involving the modelling and simulation of a collaborative multi-agent system using a hybrid control approach.

The following year, he decided to explore areas outside the electrical and electronic engineering stream. This time he did a summer internship at the University of South Australia, where he worked on the design and fabrication of a glucose biosensor based on glucose enzyme immobilisation on titanium dioxide nanotube array.

For his Honours project, Andrew will examine how adversarial data (malicious inputs) can be used to attack, or fool, machine learning algorithms. This work will involve identifying and simulating adversarial attacks, as well as devising countermeasures to deal with them. Andrew believes that artificial intelligence will play a major role in the next industrial revolution and, instead of watching it all happen, he wishes to be part of it.

### Anthony Randell

Bachelor of Sustainable Environments (Honours)

Anthony's GPA of 6.6 was the highest among the 2016 graduates of the University of South Australia's Bachelor of Environmental Science course. During his degree he was awarded a New Colombo Plan Scholarship and spent six months in Fiji. He studied at the University of the South Pacific and was a volunteer intern with the local environmental NGO NatureFiji-MareqetiViti. On a subsequent two-week study trip, he guided and introduced fellow university students to life in Fiji. He has since co-authored a paper on Fijian mountain flora.

Immediately after completing his degree, Anthony interned with the South Australian Research and Development Institute (SARDI) as part of a Summer Scholarship. He conducted research to help with seagrass restoration along Adelaide's coast. The experience sparked his interest in these marine plants and led to him deciding to return to university.

Anthony's Honours project is bringing together several experts from the University of South Australia and SARDI. He will assess the relationship between root associated microbes and their influence on seagrass seedling growth, using a combination of DNA analysis, electron microscopy, and a three-month experiment growing *Posidonia* seagrass. He hopes that beneficial bacteria will be identified and then used to improve the success of future restoration efforts.

Anthony has a passion for the protection and restoration of native flora and hopes his future career will be in community engagement and/or research. He aims to help more people in the community understand why the natural world is important and needs protection.

## SA Power Networks / Playford Trust Scholarship

### Liam Mallamo

Bachelor of Engineering (Honours) (Electrical and Electronic),  
University of South Australia

Liam is one of the top students in the University of SA's Electrical and Electronic Engineering Program and has a keen interest in sustainable energy generation, transmission and distribution. He plans to pursue a career in South Australia's electricity industry and contribute to rapidly changing energy development.

In each year he has been at university, Liam has received either the Chancellor's Letter of Commendation, for achieving grades in the top five per cent of his program, or a University Merit Award, for being in the top 15 per cent. As a recipient of the prestigious 2017 Australian Power Institute (API) Power Engineering Bursary, he was given the opportunity to take on an undergraduate engineering position in the electricity industry while still studying. He is currently working with SA Power Networks in its Future Networks team. In this role, he has been able to contribute to several large projects, including the Tesla SA Virtual Power Plant.

Liam is also undertaking an Engineering Honours Project in partnership with SA Power Networks. It revolves around increasing the electricity distribution network's capacity to host solar photovoltaic (PV) generation. The goal is to determine the effectiveness of using customer PV inverters to manage grid voltage in areas with large amounts of PV generation.

Driven by his other passion – for all things space – Liam is the President of the UniSA Rocketry Club. Through the club, he has been able to lead a team of student engineers in the design of two high-powered rockets for a national competition.

## WSP / Playford Trust Scholarship

### Douglas Radford

Bachelor of Engineering (Honours) (Civil and Environmental) with  
Bachelor of Finance, The University of Adelaide

Douglas has achieved outstanding results, as evidenced by his winning the Executive Dean's Recognition of Academic Excellence Award, the Adelaide Undergraduate Award and the Ian Cocks Memorial Trust Scholarship.

To complement his academic achievements, he actively seeks and creates co-curricular opportunities to benefit his peers and the university. His key interests outside of engineering include sustainability, holistic design and positive culture development.

Douglas willingly applies his time and skills to humanitarian engineering. He has undertaken two recycling business development projects with social business company Project Everest Ventures: firstly, in Timor-Leste; and then as the leader of a multi-disciplinary team of eight in Siem Reap, Cambodia. Both projects seek to drive economic growth and deliver social benefit in developing nations, while also offering students a chance to develop leadership skills.

Most recently, Douglas undertook a 10-week internship with the Department of Planning, Transport and Infrastructure, where he worked with the Bridge Team on the development of a program, based on key risk measures, to prioritise bridge upgrades across SA.

Last year, Douglas was elected Vice President of the Adelaide University Engineering Society and worked to foster a stronger, safer and more inclusive organisation that enables students to develop social and professional networks. This year he is serving as President. He is also a key member of the Adelaide University Football Club and helps out with the Division 1 Reserves team.

## Thomas Foods International / Playford Trust Scholarship

### Niki McCarthy

Animal and Veterinary Sciences, The University of Adelaide

Niki has crammed quite a few things into her life to date – she's been a high school teacher, a police officer, and a Federal public sector manager, to name a few. Her greatest love, however, has always been animals, and that is why she recently returned to university to study science.

On completion of her Bachelor of Science (Zoology) Niki was awarded the Dean's Medal for academic excellence. In 2018, she won a University of Adelaide Three-Minute Thesis competition, received First Class Honours for her Bachelor of Animal Science and was Dux of the Honours cohort. She was also the only student in the School of Animal and Veterinary Sciences to achieve the highest level of first-class honours for her final thesis.

Niki's goal is to become an expert in sheep reproduction and nutrition and conduct world-leading research that leads to increasing on-farm productivity by reducing lamb mortality, thus enhancing the competitiveness of South Australia's sheep industry.

Her PhD will look at the effects of giving different feed supplements to pregnant merino ewes to improve the birthweight and vigour of newborn lambs. Her project is considered to be at the cutting edge of research and development within the sheep industry and is being supported by Meat & Livestock Australia and the South Australian Research and Development Institute.

In her spare time Niki wrangles two young children, is a board member of the Valley and Plains Community Energy Cooperative (a solar energy co-op) and helps with the training and development of undergraduate students in the Veterinary Sciences faculty at Roseworthy Campus.

## Playford Trust PhD Scholarships

### Yazan Aroui

Australian School of Petroleum, The University of Adelaide

As a self-driven high-achiever, Yazan is determined to play a major role in the transition of the resources industry into the digital revolution. It is his keen interest in combining mathematics, computer science and petroleum engineering that has led him to pursue a PhD.

Having achieved first-class honours in his undergraduate degree, he garnered the full support and backing of his supervisors in his aim to become a technical specialist. His achievements include being awarded the Executive Dean's Recognition of Academic Excellence and being invited to join the prestigious Golden Key International Honour Society.

Yazan's research is focused on using advances in technology to enable companies to maximise the returns from their assets, without additional capital expenditure, using optimisation algorithms. This research has gained the attention of the Australian Petroleum Production & Exploration Association, which has described his work as innovative and "ground-breaking" research for Australia's oil and gas industry.

Yazan is a committed volunteer and has supported a number of organisations. He is currently an executive committee member for the Society of Petroleum Engineers Student Chapter and is representing his faculty in the University Experience Ambassadors Program. An advocate for leadership through physical activity, he has served as assistant head coach for a local youth soccer team and wants to see young people in his community become the leaders of the future.

## Andrea Bertram

Fisheries Genomics| Flinders University

Andrea is interested in the application of DNA-based methods in addressing questions important for the sustainable management of harvested aquatic organisms. Her ultimate goal is to contribute to the conservation of biodiversity by generating data and developing innovative approaches that will be valuable for effectively conserving and managing wildlife populations.

After completing her Bachelor of Science (Honours), Andrea volunteered on several research projects to gain the experience necessary to begin achieving her career goal. They involved using DNA-based approaches to both generate data for fisheries stock assessment and develop management arrangements for fishery resources. As a result of her work, and subsequent employment in fisheries research, Andrea attained authorship on three scientific articles that have been published in leading journals in the field; one manuscript in review; and three others in the advanced stages of preparation. She is first author on three of these articles.

The focus of Andrea's PhD project relates to her career aspirations. She will use genomic-based approaches to generate information important for the sustainable management of snapper, a highly significant economic, recreational and ecological fish resource in Australia.

Andrea's primary supervisor says she has excelled in both the laboratory and the field, and shows some of the skills found in the best postgraduate students: ambition, determination, organisation, excellence at multi-tasking, intelligence and an excellent education. Her work is destined to generate outcomes that will improve the scientific basis of policy frameworks in fisheries science, an area of strategic importance to South Australia.

## Nicholas Booth

Biotechnology, Flinders University

Nick completed his Bachelor of Science (Biotechnology) degree with a first-class Honours in 2018. He was a Playford Trust Honours Scholar, and also received New Colombo Plan and A.J. & I.M. Naylor scholarships.

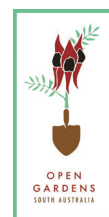
Nick's Honours project required a detailed bioinformatic analysis of genetic data bases, as well as a range of molecular and physiological techniques in the experimental phase. According to his supervisor, he grasped the concepts behind the project with ease and showed a great deal of initiative and innovation in tackling the problem. He is credited with being a self-starter with advanced critical analysis and problem-solving skills, requiring only minimal supervision. These traits made Nick's project a great success, with one examiner commenting that his thesis was the equivalent of "half a PhD".

In recognition of his work, he was offered a casual position at Flinders to further his research until the commencement of his postgraduate studies.

Over the coming years, Nick's research will focus on nitrogen fixation in legumes, a process that is unique to this family of plants. He will aim to characterise a number of transport proteins fundamental to this process, in an attempt to identify key regulatory steps.

His project is vital in developing a sustainable agricultural system using legumes, as nitrogen is essential to plant growth. Improving nitrogen fixation in legumes would result in increased growth and enhance their use in crop rotations – a system that increases soil nitrogen reserves and minimises the use of fertilisers.

## Our Partners



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# Playford Trust Awards Additional Scholars' Biographies

## Seeley International / Playford Trust Scholarship

### Monica Elgindi

Certificate IV in Refrigeration and Air Conditioning  
TAFE SA

Monica is in the final year of her apprenticeship in Refrigeration and Air Conditioning with Butterfields Servicing. Her supervisors at TAFE SA have praised Monica's strong problem-solving skills, her passion for customer service and her positive attitude in challenging situations.

Monica is not intimidated in a male dominated industry and has faced and overcome challenges, both physical and mental. These have motivated her to use these experiences and share them with other female apprentices coming into the industry.

With a background in administration and retail management, Monica has been personally and professionally tested throughout her training but loved every second of it! Her apprenticeship has given her new skills and knowledge, which she wants to use to further her career in the Mechanical Services industry.

Having been a Gymnastics Coach and Retail Manager gave Monica initial exposure to leadership. Participating in the *Ignite Leadership for Women* program in 2008, while working in the public sector, boosted her confidence and allowed her to take risks and make good decisions.

The scholarship will provide Monica with the academic tools to continue with her career where she can assist and support future apprentices and where she hopes to be recognised on her merits, and not her gender. It is her passion to incorporate customer relations and client satisfaction into the Heating Ventilation and Air Conditioning industry.

## Coopers Brewery / Playford Trust PhD Scholarship

### Lucien Alperstein

Wine Microbiology and Microbial Biotechnology  
School of Agriculture, Food and Wine  
The University of Adelaide

Lucien is completing honours at The University of Adelaide, where his studies have included traditional Aboriginal and Torres Strait Islander alcoholic beverage production. Lucien will start a PhD in the second half of 2019 and continue and expand this research into the microbiology of Indigenous fermented foods and beverages.

Lucien's Honours project has involved working with more than 1000 yeasts and bacteria isolated from Way-a-linah, a Eucalyptus sap, which was fermented by Tasmanian Aboriginal people using the aptly-named Cider Gum.

There are many different types of wild yeasts found across the world, each with their own uses and characteristics. His project has involved conducting very small fermentations and tests to assess in what conditions these Tasmanian wild yeasts can survive and thrive, what characteristics they might bring to the traditional fermented beverage, and how well they survive in alcoholic fermentation. Some of these yeasts may be unique to Australia, and Lucien is hoping to better understand how they work.

He has been lucky enough to go on a field trip to collect samples from rare Cider Gums at a plantation and attend a conference in Sydney. Support from the Coopers Brewery/Playford Trust scholarship has allowed Lucien to focus on study and through the generosity of Jon Meneses at Coopers, he has been shown the inner workings of the brewery.

Lucien has maintained a high standard of work and outside of university has worked with artists on microbiology-related projects and forged working relationships with breweries and wineries both locally and interstate.

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